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ABSTRACT

This study explored trends in how Americans spent disposable personal income (DPI) on recreational activities from 1929 to 1979. Statistics were compiled from the Economic Report of the President and the United States Department of Commerce. Twelve classifications of recreation expenditures are presented: (1) books and maps; (2) magazines, newspapers, and sheet music; (3) nondurable toys and sport supplies; (4) wheel goods, durable toys, sport equipment, boats, and pleasure aircraft; (5) radio and television receivers, records, and musical instruments; (6) radio and television repair; (7) flowers, seeds, and potted plants; (8) admissions to specified spectator amusements (sports events, films, theater); (9) clubs and fraternal organizations; (10) commercial participant amusements; (11) pari-mutual net receipts; and (12) miscellaneous hobbies and pets. Tables present information on: (1) consumer expenditures on recreation; (2) DPI and personal consumption expenditures; (3) per capita DPI and consumer expenditures on recreation; (4) consumer expenditures on recreation as a percent of DPI; (5) consumer expenditures on recreation as a percent of personal consumption expenditures; (6) increase or decrease of consumer expenditures on recreation as a percent of DPI, personal consumption expenditures, and total recreation expenditures 1929-68 and 1969-79; (7) classification of consumer expenditures on recreation as a percent of total recreation expenditures; and (8) estimated consumer expenditures on recreation for 1980-90. (JD)

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RECREATION EXPENDITURES BY U. S. CONSUMERS, 1929-1979

By
James W. Kitchen*
James E. Miller **
James W. Graves ***

August 1982

Texas Tech University
College of Agricultural Sciences

* Professor, Department of Park Administration and Landscape Architecture Texas Tech University, Lubbock, Texas 79409

** Former Graduate Research Assistant, Department of Park Administration and Landscape Architecture, Texas Tech University, Lubbock, Texas 79409

*** Professor, Agricultural Economics, Texas Tech University, Lubbock, Texas 79409

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AN ANALYSIS OF CONSUMER EXPENDITURES ON RECREATION IN THE UNITED STATES 1929-1979

by
James W. Kitchen
James E. Miller
James W. Graves

INTRODUCTION

Man has always had, since the earliest recorded civilizations, some degree of unobligated time. History describes countless forms of recreational pursuits which have been used to fill leisure hours -- particularly by the wealthy and influential social classes of each era. But it has been only within the past century, and among the highly industrialized Western nations, that both leisure and economic growth have made it possible for recreation to be widely available to all social classes.

In 1968, Kitchen and James analyzed consumer expenditures on recreation from 1929-1968. Data on consumer expenditures were compiled for these years from the Economic Report of the President and the U. S. Department of Commerce. The study explored the question of whether Americans were indeed spending a greater percentage of their Disposable Personal Income (DPI) on recreation or; was the increase in spending on recreational pursuits the result of larger incomes, inflation, or a larger population spending approximately the same per capita rate. Projections were made for the years 1975 and 1980 to determine whether current trends might be assumed to continue.

In order to consider past economic changes and their effects on the dawning 80's, it has become desirable to revise and update the Kitchen and James study, and to continue to monitor the trends of consumer expenditures on recreation. Reliable statistics are available from the U. S.

Department of Commerce for the years 1969-1979 which reflect the consumer's use of disposable personal income on recreation expenditures. On the basis of these statistics, marked shifts and changes in the leisure market can be analyzed, trends in the past decade can be studied, and projections for the future can be made.

There are several factors of particular importance justifying the need for the study of recreational expenditures. Public service organizations and private industry are involved in many facets of the leisure market. The rationale for consumer spending on leisure services and commodities is a significant factor in planning for further services and products. Given expenditure data, shifts in recreation expenditures can be analyzed and based on these results, the management can adjust future commodities and services. Ultimately, the public and private provider of recreation can make more intelligent management decisions concerning leisure services.

In their study, Kitchen and James made projections of consumer expenditures on recreation for 1975 and 1980. These projections can now be compared with actual data provided by the U. S. Department of Commerce. On the basis of these comparisons, the model used by Kitchen and James can be validated; and if needed can be revised to make more accurate predictions of consumer expenditures on recreation of the year 1990.

METHODOLOGY

The first step in the analysis of consumer expenditures on recreation is to gather the most reliable current data. The Economic Report of the President 1980, yielded figures for disposable personal income and personal consumption expenditures. U. S. Department of Commerce

Publications (1974, 1979) provided data for twelve classifications of recreation expenditures and the total consumer expenditures on recreation. Each classification of recreation expenditures was designated by the Department of Commerce as either a durable commodity, nondurable commodity, or a service. The twelve classifications are as follows:

1. Books and maps (durable commodity)
2. Magazines, newspapers and sheet music (nondurable commodity)
3. Nondurable toys and sport supplies (nondurable commodity)
4. Wheel goods, durable toys, sport equipment, boats and pleasure aircraft (durable commodity)

   Classifications 3 and 4 include toys, games, sporting, athletic, photographic goods and related products. These commodities are divided roughly between the two groups on the basis of durability.
5. Radio and television receivers, records and musical instruments (durable commodity)
6. Radio and television repair (service)
7. Flowers, seeds, and potted plants (nondurable commodity)
8. Admissions to specified spectator amusements (service)
   a. Motion picture theaters (service)
   b. Legitimate theaters and opera and entertainments of nonprofit institutions, except athletics (service)
   c. Spectator sports (service)

      Comprises professional baseball, football, hockey, horse and dog race tracks, college football, and other amateur spectator sports
9. Clubs and fraternal organizations, except insurance (service)

   Comprises gross receipts less cash benefits of fraternal,

patriotic, and women's organizations except insurance; and dues and fees of athletic, social and luncheon clubs, and school fraternities

10. Commercial participant amusements (service)

    Comprises billiard parlors, bowling alleys, dancing, riding, shooting, skating and swimming places, amusement devices and parks, daily golf course green fees, golf instruction, club rental, and caddy fees, sightseeing buses, guides and private flying operations

11. Pari-mutual net receipts (service)

12. Other (service)

    Comprises photo developing and printing, photographic studios, collector's net acquisition of stamps and coins, hunting dog purchase and training, sports guide service, veterinary service, purchase of pets, camp fees, non-vending coin machine receipts minus payoff, and other commercial amusements.

Date on these classifications, from the Economic Report of the President 1980, are listed in terms of current dollars for each year, and therefore include the effects of price increases over time. To remove the inflationary effects and express the data in "real" terms, each classification was inflated by dividing the yearly recreation expenditure by the implicit price deflator (1972 = 100) for either durable commodities, nondurable commodities, or services. The implicit price deflators for each year were acquired from the 1980 Economic Report of the President.

Kitchen and James expressed expenditures of recreation in terms of 1958 dollars. Currently, governmental statistics and figures provided by the U. S. Department of Commerce, are presented in terms of 1972 dollars.

Therefore, an initial step in the development of this analysis was to convert all tables from 1958 dollars to 1972 dollars. By converting all figures to 1972 dollars, the past decade can be compared to earlier years. The data on recreation expenditures are thus presented in terms of "constant" 1972 dollars. Finally, a predictor equation of consumer expenditures for the next decade was developed.

PRESENTATION OF RESULTS

Expenditures 1929-1979

Consumer recreation expenditures from 1929 to 1972 dollars are presented in Table 1. From 1929 to 1968 total recreation expenditures increased by 29.5 billion dollars or 244 percent. In the 10 year period from 1969 to 1979, total recreation expenditures increased by an additional 19.3 billion dollars or 45 percent. In absolute terms, total recreation expenditures increased by 50.3 billion dollars or 416 percent in the fifty-year period. Additionally, expenditures for each of the twelve classifications have increased. Expenditures for motion pictures had declined from 2.3 billion dollars in 1929 to 1.6 billion dollars in 1968. In the past decade though, these expenditures have increased 1.1 billion dollars to a total of 2.7 billion dollars, showing a marked increase. Also, significant increases have occurred in expenditures for wheel goods, durable toys, etc., and radio and television receivers. These categories have risen $11.3 billion and $12.1 billion, or 2200 percent and 504 percent, respectively, since 1929.

As shown in Table 2, disposable personal income (DPI) in 1972 dollars, increased from $229.8 billion in 1929 to $695.2 billion in 1968, an increase

TABLE 1. CONSUMER EXPENDITURES ON RECREATION BY RECREATION EXPENDITURE CLASSIFICATION, 1929-1979 (IN BILLIONS 1972 DOLLARS)

YEAR	TOTAL RECREATION EXPENDITURE	BOOKS AND MAPS (1)	MAGAZINES AND NEWSPAPERS (2)	NONDURABLE TOYS AND SPORTS (3)	WHEEL GOODS AND DURABLE TOYS (4)	RADIO AND TV RECEIVERS (5)	RADIO AND TV REPAIR (6)	FLOWERS, SEEDS AND PLANTS (7)
1929	12.10	.71	1.40	.88	.51	2.40	.08	.58
1933	8.20	.48	1.60	.68	.29	.62	.05	.34
1939	11.40	.65	1.80	.93	.65	1.20	.09	.63
1940	12.20	.66	1.90	.99	.71	1.40	.11	.65
1941	12.80	.65	1.90	1.10	.80	1.60	.12	.68
1942	12.70	.69	1.80	1.00	.73	1.50	.14	.62
1943	12.40	.81	1.90	.90	.60	.90	.18	.63
1944	12.80	.91	1.90	.99	.65	.63	.20	.71
1945	13.90	.97	2.00	1.20	.74	.64	.24	.79
1946	17.90	.96	2.10	1.60	1.30	1.80	.29	.80
1947	17.50	.79	2.10	1.50	1.40	2.10	.34	.75
1948	17.30	.85	2.20	1.70	1.40	2.10	.39	.71
1949	18.00	.91	2.40	1.90	1.20	2.40	.44	.75
1950	19.60	.95	2.50	2.30	1.20	3.40	.60	.75
1951	19.10	1.00	2.40	2.50	1.20	3.00	.71	.75
1952	19.60	1.10	2.50	2.60	1.30	3.10	.75	.79
1953	20.20	1.10	2.70	2.60	1.40	3.40	.78	.82
1954	20.60	1.10	2.70	2.40	1.60	3.70	.84	.81
1955	21.90	1.20	2.80	2.70	1.90	3.90	.88	.82
1956	22.90	1.20	2.80	2.90	2.10	3.90	.95	.82
1957	22.70	1.20	2.80	2.90	2.20	3.60	1.00	.85
1958	22.90	1.30	2.90	3.00	2.30	3.50	1.10	.77
1959	24.30	1.30	3.00	3.30	2.50	3.70	1.10	.87
1960	24.90	1.40	3.00	3.40	2.40	3.70	1.10	.97
1961	25.60	1.50	2.80	3.60	2.40	3.80	1.20	.97
1962	27.20	1.50	3.10	3.90	2.40	4.00	1.20	1.10
1963	28.90	1.70	3.20	4.20	2.60	4.30	1.30	1.30
1964	31.30	1.90	3.30	4.50	2.90	5.00	1.30	1.40
1965	33.60	1.90	3.40	4.60	3.40	5.90	1.30	1.70
1966	37.60	2.10	3.90	5.00	4.20	7.20	1.20	1.80
1967	39.30	2.10	3.90	5.20	4.70	7.90	1.30	1.80
1968	41.60	2.10	4.10	5.50	5.20	8.40	1.30	2.00
1969	43.10	2.20	4.00	5.70	5.80	8.80	1.30	2.20
1970	44.30	2.50	4.20	5.90	5.80	9.30	1.20	2.30
1971	45.20	2.50	4.40	6.00	6.00	9.60	1.20	2.30
1972	49.10	2.50	4.70	6.50	7.30	10.90	1.20	2.70
1973	52.10	2.70	5.40	6.80	8.10	12.10	1.30	2.70
1974	51.80	2.80	5.70	6.50	8.20	12.20	1.20	2.60
1975	52.60	3.10	5.70	6.40	8.10	12.60	1.10	2.60
1976	55.20	3.00	5.90	6.80	8.50	13.30	1.10	2.80
1977	57.80	3.40	6.20	7.00	9.40	13.90	1.10	2.90
1978	60.80	4.00	6.50	7.60	10.60	14.30	1.10	3.30
1979	62.40	4.00	6.10	7.90	11.80	14.50	1.20	3.10

Due to rounding errors, individual classifications do not add to total recreation expenditure.
Source: 1929-1974 -- Data in current dollars were obtained from U.S. Department of Commerce, Office of Business Economics, The National and Product Accounts of the United States, 1929-1974, Statistical Tables. (Washington, D.C.: U.S. Government Printing Office.) pg. 90-91, 337.

ADMISSIONS TO SPECTATOR EVENTS (8)	MOTION PICTURE THEATERS (8a)	LEGITIMATE THEATER (8b)	SPECTATOR SPORTS (8c)	CLUBS ETC. (9)	COMMERCIAL PARTICIPANT AMUSEMENT (10)	PARI-MUTUAL NET RECEIPTS (11)	OTHERS (12)
2.90	2.30	.40	.21	.96	.66	.03	.76
2.20	1.80	.16	.19	.80	.46	.02	.95
2.80	2.30	.22	.34	.68	.63	.14	.95
3.10	2.50	.24	.33	.69	.67	.19	.99
3.20	2.60	.26	.35	.66	.68	.21	1.10
3.70	3.20	.28	.28	.63	.66	.21	1.10
4.30	3.70	.35	.18	.63	.63	.23	1.10
4.30	3.70	.39	.22	.65	.67	.36	1.20
4.60	3.90	.40	.31	.75	.76	.41	1.20
5.30	4.30	.45	.51	.92	.97	.62	1.40
4.80	3.80	.45	.53	.95	.97	.61	1.40
4.30	3.40	.41	.52	.98	.96	.58	1.30
4.10	3.10	.40	.52	.98	.93	.54	1.30
3.80	2.90	.39	.47	.97	.94	.50	1.30
3.40	2.60	.37	.44	.96	.95	.51	1.30
3.10	2.40	.36	.42	.95	.93	.62	1.30
2.90	2.10	.36	.40	.93	.93	.67	1.40
2.90	2.10	.38	.39	.94	.92	.64	1.40
3.10	2.30	.42	.39	.97	1.00	.65	1.50
3.10	2.30	.45	.39	1.00	1.10	.68	1.60
2.70	1.80	.46	.39	1.00	1.20	.70	1.70
2.40	1.50	.46	.39	1.10	1.30	.71	1.80
2.40	1.40	.48	.45	1.10	1.50	.76	2.00
2.40	1.40	.50	.52	1.00	1.80	.79	2.20
2.40	1.40	.47	.58	1.10	2.00	.82	2.40
2.50	1.30	.50	.66	1.10	2.10	.92	2.60
2.50	1.30	.49	.73	1.10	2.20	.97	2.80
2.60	1.30	.53	.81	1.20	2.30	1.10	3.00
2.90	1.40	.52	.89	1.20	2.30	1.10	3.20
3.00	1.50	.56	.99	1.20	2.30	1.10	3.50
3.00	1.40	.60	1.00	1.20	2.40	1.10	3.80
3.20	1.60	.60	1.10	1.30	2.50	1.20	4.00
3.40	1.60	.60	1.10	1.30	2.50	1.20	4.20
3.50	1.70	.61	1.20	1.30	2.60	1.30	4.30
3.50	1.70	.60	1.20	1.30	2.50	1.30	4.30
3.50	1.60	.63	1.20	1.30	2.70	1.40	4.40
3.50	1.70	.64	1.20	1.30	2.80	1.40	4.70
3.50	1.80	.63	1.10	1.30	2.80	1.40	4.70
3.90	2.10	.65	1.20	1.30	2.90	1.40	4.90
4.20	2.30	.71	1.20	1.30	3.00	1.40	5.20
4.80	2.90	.74	1.20	1.20	3.00	1.30	5.10
4.90	2.80	.84	1.20	1.20	3.00	1.40	5.00
4.90	2.70	.95	1.30	1.20	3.10	1.40	5.10

Source: 1975-1979 -- Data in current dollars were obtained from U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 100th Edition, September, 1979.

Data in current dollars were then delfated to 1972 dollars using the implicit price deflators found in Economic Report of the President, Transmitted to the Congress January, 1980. (Washington, D.C., U.S. Government Printing Office, 1980).

TABLE 2. DISPOSABLE PERSONAL INCOME AND PERSONAL CONSUMPTION EXPENDITURES, 1929-1979 (IN BILLIONS, 1972 DOLLARS)

YEAR	DISPOSABLE PERSONAL INCOME	PERSONAL CONSUMPTION EXPENDITURES	PCE AS A PERCENT OF DPI
1919	229.8	215.6	93.82
1933	169.7	170.7	100.59
1939	230.1	220.3	95.74
1940	244.3	230.4	94.31
1941	278.1	244.1	87.77
1942	317.3	241.7	76.17
1943	332.2	248.7	74.86
1944	343.9	255.7	74.35
1945	338.6	271.4	80.15
1946	332.4	301.4	90.67
1947	318.8	306.2	96.05
1948	335.5	312.8	93.23
1949	336.1	320.0	95.21
1950	361.9	338.1	93.42
1951	371.6	342.3	92.12
1952	382.1	350.9	91.83
1953	397.5	364.2	91.62
1954	402.1	370.9	92.24
1955	425.9	395.1	92.77
1956	444.9	406.3	91.32
1957	453.9	414.7	91.36
1958	459.0	419.0	91.29
1959	477.4	441.5	92.48
1960	487.3	453.0	92.96
1961	500.6	462.2	92.33
1962	521.6	482.9	92.58
1963	539.2	501.4	92.99
1964	577.3	528.7	91.58
1965	612.4	558.1	91.13
1966	643.6	586.1	91.07
1967	669.8	603.2	90.06
1968	695.2	633.4	91.11
1969	712.3	655.4	92.01
1970	741.6	668.9	90.20
1971	769.0	691.9	89.97
1972	801.3	733.0	91.48
1973	854.7	767.7	89.82
1974	842.0	760.7	90.34
1975	859.7	774.6	90.10
1976	891.8	820.6	92.02
1977	929.5	861.7	92.71
1978	972.5	900.8	92.63
1979	994.1	924.5	93.00

Source: DPI and PCE from Economic Report of the President, transmitted to the Congress January, 1980 (Washington, D.C.: U.S. Government Printing Office, 1980), Table B-13, p. 218.

of $298.9 billion or 43 percent over the past 10 years. Personal consumption expenditures (PCE) also increased, from $215.6 billion in 1929 to $633.4 billion in 1968, representing an increase of 194 percent. In the past decade, personal consumption expenditures have risen and by 1979 totaled $924.5 billion. This is a 302 percent increase over 1929 and a 46 percent increase since 1968.

An increase in total recreation expenditures is also apparent from per capita recreation expenditure data (Table 3). Per capita, DPI increased from $1,886 in 1929 to $3,464 in 1968, an increase of 84 percent. In the past decade per capita DPI increased an additional $994 or 22 percent. From 1929 to 1968 per capita recreation expenditures increased from $99 to $207; an increase of 109 percent. In 1979 per capita recreation expenditures totaled $284, an increase of 187 percent over 1929 and 37 percent over 1968. Figure 1 graphically illustrates the movement in consumer expenditures on recreation from 1929 to 1979.

In Table 4, it can be seen that consumers are now spending a greater percentage of disposable personal income on recreation than before. In 1929 consumers were spending 5.27 cents out of each dollar of DPI on recreational pursuits as compared to 5.98 cents in 1968 and 6.27 cents in 1979. Although an increase from 5.27 cents to 6.27 cents out of each dollar spent over the past fifty years does not appear significant, it represents a 19 percent increase in recreation expenditures relative to DPI.

The largest shift in percentage of DPI spent on recreation occurred in classification 4 (wheel goods, durable toys, etc.) between 1929 and 1968. Over this period expenditures on these items increased 0.53 percentage points representing a 259 percent increase. Between 1969 and 1979

TABLE 3. PER CAPITA DISPOSABLE PERSONAL INCOME AND CONSUMER EXPENDITURES ON RECREATION: (IN 1972 DOLLARS)

YEAR	POPULATION (MILLIONS)	PER CAPITA (DPI)	PER CAPITA RECREATION EXPENDITURE
1929	122	$1,886	$ 99
1933	126	1,350	65
1939	131	1,756	87
1940	132	1,849	92
1941	133	2,084	96
1942	135	2,353	94
1943	137	2,429	91
1944	138	2,485	93
1945	140	2,420	99
1946	141	2,351	127
1947	144	2,212	122
1948	147	2,288	118
1949	149	2,253	121
1950	152	2,386	129
1951	155	2,408	123
1952	158	2,434	124
1953	160	2,491	126
1954	163	2,476	126
1955	166	2,577	132
1956	170	2,643	135
1957	172	2,650	132
1958	175	2,636	130
1959	179	2,696	136
1960	181	2,697	138
1961	184	2,725	139
1962	187	2,796	145
1963	189	2,849	153
1964	192	3,009	163
1965	195	3,152	172
1966	197	3,274	191
1967	199	3,371	197
1968	201	3,464	207
1969	203	3,515	212
1970	205	3,619	216
1971	207	3,714	218
1972	209	3,837	235
1973	210	4,062	248
1974	212	3,973	244
1975	214	4,025	246
1976	215	4,144	257
1977	217	4,285	266
1978	219	4,449	278
1979	220	4,509	284

Source: Economic Report of the President, transmitted to the Congress January, 1980 (Washington, D.C.: U.S. Government Printing Office, 1980). Table B-22, p. 229. Per Capita DPI -- Economic Report of the President (1980). Per Capita Recreation -- Computed from population and data Table 1.

Figure 1. Consumer Expenditures on Recreation

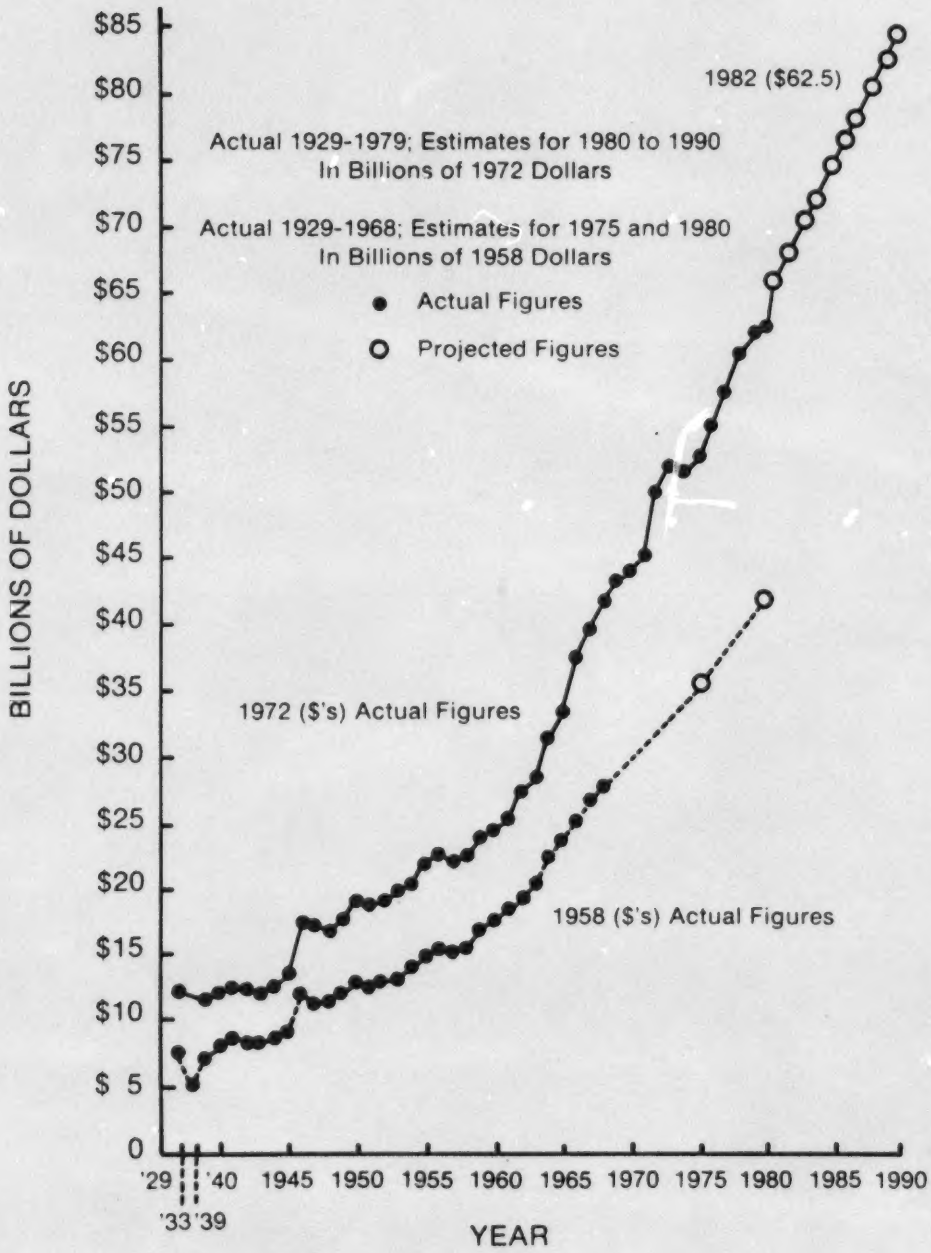

TABLE 4. CONSUMER EXPENDITURES ON RECREATION AS A PERCENT OF DISPOSABLE PERSONAL INCOME (1972 DOLLARS)

YEAR	TOTAL RECREATION EXPENDITURE	BOOKS AND MAPS (1)	MAGAZINES AND NEWSPAPERS (2)	NONDURABLE TOYS AND SPORTS (3)	WHEEL GOODS AND DURABLE TOYS (4)	RADIO AND TV RECEIVERS (5)	RADIO AND TV REPAIR (6)	FLOWERS, SEEDS AND PLANTS (7)
1929	5.27	.31	.61	.38	.22	1.04	.03	.25
1933	4.83	.28	.94	.40	.17	.37	.03	.20
1939	4.95	.28	.78	.40	.28	.52	.04	.27
1940	4.99	.27	.78	.41	.29	.57	.05	.27
1941	4.60	.23	.68	.40	.29	.58	.04	.24
1942	4.00	.22	.57	.32	.23	.47	.04	.20
1943	3.73	.24	.57	.27	.18	.27	.05	.19
1944	3.72	.26	.55	.29	.19	.18	.06	.21
1945	4.11	.29	.59	.35	.22	.19	.07	.23
1946	5.39	.29	.63	.48	.39	.54	.09	.24
1947	5.49	.25	.66	.47	.44	.66	.11	.24
1948	5.16	.25	.66	.51	.42	.63	.12	.21
1949	5.36	.27	.71	.57	.36	.71	.13	.22
1950	5.42	.26	.69	.64	.33	.94	.17	.21
1951	5.14	.27	.65	.67	.32	.81	.19	.20
1952	5.13	.29	.65	.68	.34	.81	.20	.21
1953	5.08	.28	.68	.65	.35	.86	.20	.21
1954	5.12	.27	.67	.60	.40	.92	.21	.20
1955	5.14	.28	.66	.63	.45	.92	.21	.19
1956	5.15	.27	.63	.65	.47	.88	.21	.18
1957	5.00	.26	.62	.64	.48	.79	.22	.19
1958	5.00	.28	.63	.65	.50	.76	.24	.17
1959	5.09	.27	.63	.69	.52	.78	.23	.18
1960	5.10	.29	.62	.70	.49	.76	.23	.20
1961	5.11	.30	.56	.72	.48	.76	.24	.19
1962	5.21	.29	.59	.75	.46	.77	.23	.21
1963	5.36	.32	.59	.78	.48	.80	.24	.24
1964	5.42	.33	.57	.78	.50	.87	.23	.24
1965	5.49	.31	.56	.75	.56	.96	.21	.28
1966	5.84	.33	.61	.78	.65	1.12	.19	.28
1967	5.87	.31	.58	.78	.70	1.18	.19	.27
1968	5.98	.30	.59	.79	.75	1.21	.19	.29
1969	6.05	.31	.56	.80	.81	1.24	.18	.31
1970	5.97	.34	.57	.80	.78	1.25	.16	.31
1971	5.88	.33	.57	.78	.78	1.25	.16	.30
1972	6.13	.31	.59	.81	.91	1.36	.15	.34
1973	6.10	.32	.63	.80	.95	1.42	.15	.32
1974	6.15	.33	.68	.77	.97	1.45	.14	.31
1975	6.12	.36	.66	.74	.94	1.47	.13	.30
1976	6.19	.34	.66	.76	.95	1.49	.12	.31
1977	6.22	.37	.67	.75	1.01	1.50	.12	.31
1978	6.25	.41	.67	.78	1.09	1.47	.11	.34
1979	6.27	.40	.61	.79	1.19	1.46	.12	.31

Source: Computed from data Tables 1 and 2.

ADMISSIONS TO SPECTATOR EVENTS (8)	MOTION PICTURE THEATERS (8a)	LEGITIMATE THEATER (8b)	SPECTATOR SPORTS (8c)	CLUBS ETC. (9)	COMMERCIAL PARTICIPANT AMUSEMENT (10)	PARI-MUTUAL NET RECEIPTS (11)	OTHERS (12)
1.26	1.00	.17	.09	.42	.29	.01	.33
1.30	1.06	.09	.11	.47	.27	.01	.56
1.22	1.00	.10	.15	.30	.27	.06	.41
1.27	1.02	.10	.14	.28	.27	.08	.41
1.15	.93	.09	.13	.24	.24	.08	.40
1.17	1.00	.09	.09	.20	.21	.07	.35
1.29	1.11	.11	.05	.19	.19	.07	.33
1.25	1.08	.11	.06	.19	.19	.10	.35
1.36	1.15	.12	.09	.22	.23	.12	.35
1.59	1.29	.14	.15	.28	.29	.19	.42
1.51	1.19	.14	.17	.30	.30	.19	.44
1.28	1.01	.12	.15	.29	.29	.17	.39
1.22	.92	.12	.15	.29	.28	.16	.39
1.05	.80	.11	.13	.27	.26	.14	.36
.91	.70	.10	.12	.26	.26	.14	.35
.81	.63	.09	.11	.25	.24	.16	.34
.73	.53	.09	.10	.23	.23	.17	.35
.72	.52	.09	.10	.23	.23	.16	.35
.73	.54	.10	.09	.23	.23	.15	.35
.70	.52	.10	.09	.22	.25	.15	.36
.59	.40	.10	.09	.22	.26	.15	.37
.52	.33	.10	.08	.24	.28	.15	.39
.50	.29	.10	.09	.23	.31	.16	.42
.49	.29	.10	.11	.21	.37	.16	.45
.48	.28	.09	.12	.22	.40	.16	.48
.48	.25	.10	.13	.21	.40	.18	.50
.46	.24	.09	.14	.20	.41	.18	.52
.45	.23	.09	.14	.21	.40	.19	.52
.47	.23	.08	.15	.20	.38	.18	.52
.47	.23	.09	.15	.19	.36	.17	.54
.45	.21	.09	.15	.18	.36	.16	.57
.46	.23	.09	.16	.19	.36	.17	.58
.48	.22	.08	.15	.18	.35	.17	.59
.47	.23	.08	.16	.18	.35	.18	.58
.46	.22	.08	.16	.17	.33	.17	.56
.44	.20	.08	.15	.16	.34	.17	.55
.41	.20	.07	.14	.15	.33	.16	.55
.42	.21	.07	.13	.15	.33	.17	.56
.45	.24	.08	.14	.15	.34	.16	.57
.47	.26	.08	.13	.15	.34	.16	.58
.52	.31	.08	.13	.13	.32	.14	.55
.50	.29	.09	.12	.12	.31	.14	.51
.49	.27	.10	.13	.12	.31	.14	.51

expenditures on classification 4 have further risen an additional 0.44 percentage points or 47 percent. The category of motion picture theaters which showed a decrease of .77 percentage points or 334 percent for the years 1929 to 1968 has increased a positive 0.4 percentage points or 23 percent in the past ten years. In general, classification 8 (admission to specified spectator amusements) has shown increases in the past ten years. Decreased expenditures as a percent of DPI on recreation from 1969 to 1979 have occurred in categories 3, (radio and television repair) .06 percentage points or 33 percent; category 8 (spectator sports) .03 percentage points or 20 percent; category 9 (clubs and fraternal organizations) .06 percentage points or 33 percent; category 10 (commercial participant amusement) .04 percentage points or 11 percent and; category 11 (parimutual net receipts) .03 percentage points or 18 percent.

Tables 2 and 5 suggest that while consumers are now spending a slightly smaller percentage of their DPI, they have shifted part of the decreasing PCE to recreation from other expenditures. In 1929 consumers were spending $5.61 of each $100 of PCE on recreation as compared to $6.57 in 1968. By 1979 consumers were spending $6.75 of each $100 of PCE on recreation (Table 5). The largest shift in the past fifty years has occurred in expenditures on classification 4 (wheel goods, durable toys, etc.) and in classification 8 (admissions to specified spectator amusement). Classification 4 increased as a percentage of PCE by 1.04 percentage points or 433 percent and classification 8 decreased 0.82 percentage points or 155 percent. A notable increase of .24 percentage points or 18 percent has occurred in classification 5 (radio and television receivers) in the past ten years. Decreased consumer expenditures on recreation as a percent of PCE between 1969 and 1979 have occurred in the categories of radio and

TABLE 5. CONSUMER EXPENDITURES ON RECREATION AS A PERCENT OF PERSONAL CONSUMPTION EXPENDITURES (1929-1979((IN 1972 DOLLARS)

YEAR	TOTAL RECREATION EXPENDITURE	BOOKS AND MAPS (1)	MAGAZINES AND NEWSPAPERS (2)	NONDURABLE TOYS AND SPORTS (3)	WHEEL GOODS AND DURABLE TOYS (4)	RADIO AND TV RECEIVERS (5)	RADIO AND TV REPAIR (6)	FLOWERS, SEEDS AND PLANTS (7)
1929	5.61	.33	.65	.41	.24	1.11	.04	.27
1933	4.80	.28	.94	.40	.17	.36	.03	.20
1939	5.17	.30	.82	.42	.30	.54	.04	.29
1940	5.30	.29	.82	.43	.31	.61	.05	.28
1941	5.24	.27	.78	.45	.33	.66	.05	.28
1942	5.25	.29	.74	.41	.30	.62	.06	.26
1943	4.99	.33	.76	.36	.24	.36	.07	.25
1944	5.00	.36	.74	.39	.25	.25	.08	.28
1945	5.12	.36	.74	.44	.27	.24	.09	.29
1946	5.94	.32	.70	.53	.43	.60	.10	.27
1947	5.72	.26	.69	.49	.46	.69	.11	.24
1948	5.53	.27	.70	.54	.45	.67	.12	.23
1949	5.63	.28	.75	.59	.38	.75	.14	.23
1950	5.80	.28	.74	.68	.35	1.01	.18	.22
1951	5.58	.29	.70	.73	.35	.88	.21	.22
1952	5.59	.31	.71	.74	.37	.88	.21	.23
1953	5.55	.30	.74	.71	.38	.93	.21	.23
1954	5.55	.30	.73	.65	.43	1.00	.23	.22
1955	5.54	.30	.71	.68	.48	.99	.22	.21
1956	5.54	.30	.69	.71	.52	.96	.23	.20
1957	5.47	.29	.68	.70	.53	.87	.24	.20
1958	5.47	.31	.69	.72	.55	.84	.26	.18
1959	5.50	.29	.68	.75	.57	.84	.25	.20
1960	5.50	.31	.66	.75	.53	.82	.24	.21
1961	5.54	.32	.61	.78	.52	.82	.26	.21
1962	5.63	.31	.64	.81	.50	.83	.25	.23
1963	5.76	.34	.64	.84	.52	.86	.26	.26
1964	5.92	.36	.62	.85	.55	.95	.25	.26
1965	6.02	.34	.61	.82	.61	1.06	.23	.30
1966	6.42	.36	.67	.85	.72	1.23	.20	.31
1967	6.52	.35	.65	.86	.78	1.31	.22	.30
1968	6.57	.33	.65	.87	.82	1.33	.21	.32
1969	6.58	.34	.61	.87	.88	1.34	.20	.34
1970	6.62	.37	.63	.88	.87	1.39	.18	.34
1971	6.53	.36	.64	.87	.87	1.39	.17	.33
1972	6.70	.34	.64	.89	1.00	1.49	.16	.37
1973	6.79	.35	.70	.89	1.06	1.58	.17	.35
1974	6.81	.37	.75	.85	1.08	1.60	.16	.34
1975	6.79	.40	.74	.83	1.05	1.63	.14	.34
1976	6.73	.37	.72	.83	1.04	1.62	.13	.34
1977	6.70	.39	.72	.81	1.09	1.61	.13	.34
1978	6.75	.44	.72	.84	1.18	1.59	.12	.37
1979	6.75	.43	.66	.85	1.28	1.57	.13	.34

Source: Computed from data Tables 1 and 2.

ADMISSIONS TO SPECTATOR EVENTS (8)	MOTION PICTURE THEATERS (8a)	LEGITIMATE THEATER (8b)	SPECTATOR SPORTS (8c)	CLUBS, ETC. (9)	COMMERCIAL PARTICIPANT AMUSEMENT (10)	PARI-MUTUAL NET RECEIPTS (11)	OTHERS (12)
1.25	1.07	.19	.10	.45	.31	.01	.35
1.29	1.05	.09	.11	.47	.27	.01	.56
1.27	1.04	.10	.15	.31	.29	.06	.43
1.35	1.09	.10	.14	.30	.29	.08	.43
1.31	1.07	.11	.14	.27	.28	.09	.45
1.53	1.32	.12	.12	.26	.27	.09	.46
1.73	1.49	.14	.07	.25	.25	.09	.44
1.68	1.45	.15	.09	.25	.26	.14	.47
1.69	1.44	.15	.11	.28	.28	.15	.44
1.76	1.43	.15	.17	.31	.32	.21	.46
1.57	1.24	.15	.17	.31	.32	.20	.46
1.37	1.09	.13	.17	.31	.31	.19	.42
1.28	.97	.13	.16	.31	.29	.17	.41
1.12	.86	.12	.14	.29	.28	.15	.38
.99	.76	.11	.13	.28	.28	.15	.38
.88	.68	.10	.12	.27	.27	.18	.37
.80	.58	.10	.11	.26	.26	.18	.38
.78	.57	.10	.11	.25	.25	.17	.38
.78	.58	.11	.10	.25	.25	.16	.38
.76	.57	.11	.10	.25	.27	.17	.39
.65	.43	.11	.09	.24	.29	.17	.41
.57	.36	.11	.09	.26	.31	.17	.43
.54	.39	.11	.10	.25	.34	.17	.45
.53	.31	.11	.11	.22	.40	.17	.49
.52	.30	.10	.13	.24	.43	.18	.52
.52	.27	.10	.14	.23	.43	.19	.54
.50	.26	.10	.15	.22	.44	.19	.56
.49	.25	.10	.15	.23	.44	.21	.57
.52	.25	.09	.16	.22	.41	.20	.57
.51	.26	.10	.17	.20	.39	.19	.60
.50	.23	.10	.17	.20	.40	.18	.63
.51	.25	.09	.17	.21	.39	.19	.63
.52	.24	.09	.17	.20	.38	.18	.64
.52	.25	.09	.18	.19	.39	.19	.64
.51	.25	.09	.17	.19	.36	.19	.62
.48	.22	.09	.16	.18	.37	.19	.60
.46	.22	.08	.16	.17	.36	.18	.61
.46	.24	.08	.14	.17	.37	.18	.62
.50	.27	.08	.15	.17	.37	.18	.63
.51	.28	.09	.15	.16	.37	.17	.63
.56	.34	.09	.14	.14	.35	.15	.59
.54	.31	.09	.13	.13	.33	.16	.56
.53	.29	.10	.14	.13	.34	.15	.55

television repair, spectator sports, and clubs and fraternal organizations (Table 6). Largest declines came in classification 8a (motion picture theaters) and classification 9 (clubs and fraternal organizations, etc.) (Table 5).

The composition of the average dollar of recreation expenditures has also changed (Table 7). As a percentage of total recreation expenditures through 1968, the largest increases occurred in classification 4 (wheel goods, durable toys, etc.) and classification 6 (radio and television repair). In the past ten years the largest increases have occurred in classification 4 (wheel goods and durable toys, etc.) and classification 5 (radio and television receivers). Notable decreases have occurred in classification 6 (radio and television repair); classification 12 (clubs and fraternal organizations, etc.); and classification 13 (commercial participant amusements) (Table 7).

PROJECTIONS

Projections were made after analyzing consumer expenditures on recreation through the years 1929 to 1979. It was first necessary to review the model Kitchen and James used to calculate projections and to verify it as to its accuracy and validity. If the model proved to be accurate further predictions could be made based on it for the upcoming decade.

It was assumed that recreation expenditures, as all personal consumption expenditures, depend primarily upon money available for a family to spend, that is DPI. Regression analysis, using DPI and total recreation expenditures for the years 1929 to 1979 in 1972 dollars, was used to develop predictions of recreation expenditures with DPI as the independent variable. The linear form $Y = a+bx$ was utilized because it produced the

TABLE 6. INCREASE (+) OR DECREASE (-) OF CONSUMER EXPENDITURES ON RECREATION AS A PERCENT OF DISPOSABLE PERSONAL INCOME, PERSONAL CONSUMPTION EXPENDITURES, AND TOTAL RECREATION EXPENDITURES 1929-1968, 1969-1979.

Classification	1929-1968 Percent of DPI	PCE	TOTAL REC.	1969-1979 Percent of DPI	PCE	TOTAL REC.
Books and Maps	-.01	.00	- .82	+.09	+.09	+1.31
Magazines, Newspapers, and Sheet Music	-.02	.00	- 1.71	+.05	+.05	+ .50
Nondurable Toys and Sport Supplies	+.41	+.46	+ 5.95	-.01	-.02	- .57
Wheel Goods, Durable Toys, Sports, Equipment, Etc.	+.53	+.58	:+ 8.29	+.38	+.40	+5.45
Radio and Television Receivers, Records & Musical Instruments	+.17	+.22	+ .36	+.22	+.23	+2.82
Radio and Television Repair	+.16	+.17	+ 2.47	-.06	-.07	-1.10
Flowers, Seeds and Potted Plants	+.04	+.05	+ .02	.00	.00	- .13
Admissions to Specified Spectator Amusements	-.80	-.84	-16.28	+.01	+.01	- .04
Motion Picture Theaters	-.77	-.82	-15.16	+.05	+.05	+ .62
Legitimate Theater and Opera, Entertainments of Non-Profit Institutions	-.08	-.10	- 1.87	+.02	+.01	+ .13
Spectator Sports	+.07	+.07	+ .90	-.02	-.03	- .47
Clubs and Fraternal Organizations Except Insurance	-.23	-.24	- 4.80	-.06	-.07	-1.10
Commercial Participant Amusements	+.07	+.38	+ .56	-.04	-.04	- .83
Pari-Mutual Net Receipts	+.16	+.18	+ 2.63	-.03	-.03	- .54
Other	+.25	+.28	+ 3.34	-.08	-.09	-1.57
Total Recreation Expenditures	+.71	+.96	--	+.22	+.17	--

Source: Computer from data Tables 4, 6, and 7.

TABLE 7. CLASSIFICATION OF CONSUMER EXPENDITURES ON RECREATION AS A PERCENT OF TOTAL RECREATION EXPENDITURES (1929-1979((IN 19[illegible] DOLLARS).

YEAR	TOTAL RECREATION EXPENDITURE	BOOKS AND MAPS (1)	MAGAZINES AND NEWSPAPERS (2)	NONDURABLE TOYS AND SPORTS (3)	WHEEL GOODS AND DURABLE TOYS (4)	RADIO AND TV RECEIVERS (5)	RADIO AND TV REPAIR (6)	FLOWERS, SEEDS AND PLANTS (7)
1929	12.10	5.87	11.57	7.27	4.21	19.83	.66	4.79
1933	8.20	5.58	19.51	8.29	3.54	7.56	.61	4.15
1939	11.40	5.70	15.79	8.16	5.70	10.53	.79	5.53
1940	12.20	5.41	15.57	8.11	5.82	11.48	.90	5.33
1941	12.80	5.08	14.84	8.59	6.25	12.50	.94	5.31
1942	12.70	5.43	14.17	7.87	5.75	11.81	1.10	4.88
1943	12.40	6.53	15.32	7.26	4.83	7.26	1.45	5.08
1944	12.80	7.11	14.84	7.73	5.08	4.92	1.56	5.55
1945	13.90	6.98	14.39	8.63	5.32	4.60	1.73	5.68
1946	17.90	5.36	11.73	8.94	7.26	10.06	1.62	4.47
1947	17.50	4.51	12.00	8.57	8.00	12.00	1.94	4.29
1948	17.30	4.91	12.72	9.83	8.09	12.14	2.25	4.10
1949	18.00	5.06	13.33	10.56	6.67	13.33	2.44	4.17
1950	19.60	4.85	12.76	11.73	6.12	17.35	3.06	3.83
1951	19.10	5.24	12.57	13.09	6.28	15.71	3.72	3.93
1952	19.60	5.61	12.76	13.27	6.63	15.82	3.83	4.03
1953	20.20	5.45	13.37	12.87	6.93	16.83	3.86	4.06
1954	20.60	5.34	13.11	11.65	7.77	17.96	4.08	3.93
1955	21.90	5.48	12.79	12.33	8.68	17.81	4.02	3.74
1956	22.90	5.24	12.23	12.66	9.17	17.03	4.15	3.58
1957	22.70	5.29	12.33	12.78	9.69	15.86	4.41	3.74
1958	22.90	5.68	12.66	13.10	10.04	15.28	4.80	3.36
1959	24.30	5.35	12.35	13.58	10.29	15.23	4.53	3.58
1960	24.90	5.62	12.05	13.65	9.64	14.86	4.42	3.90
1961	25.60	5.86	10.94	14.06	9.38	14.84	4.69	3.79
1962	27.20	5.51	11.40	14.34	8.82	14.71	4.41	4.04
1963	28.90	5.88	11.07	14.53	9.00	14.88	4.50	4.50
1964	31.30	6.07	10.54	14.38	9.27	15.97	4.15	4.47
1965	33.60	5.65	10.12	13.69	10.12	17.56	3.87	5.06
1966	37.60	5.59	10.37	13.30	11.17	19.15	3.19	4.79
1967	39.30	5.34	9.92	13.23	11.96	20.10	3.31	4.58
1968	41.60	5.05	9.86	13.22	12.50	20.19	3.13	4.81
1969	43.10	5.10	9.78	13.23	13.46	20.42	3.02	5.10
1970	44.30	5.64	9.48	13.32	13.09	20.99	2.71	5.19
1971	45.20	5.53	9.73	13.27	13.27	21.24	2.65	5.09
1972	49.10	5.09	9.57	13.24	14.87	22.20	2.44	5.50
1973	52.10	5.18	10.36	13.05	15.55	23.22	2.50	5.18
1974	51.80	5.41	11.00	12.55	15.83	23.55	2.32	5.02
1975	52.60	5.89	10.84	12.17	15.40	23.95	2.09	4.94
1976	55.20	5.43	10.69	12.32	15.40	24.09	1.99	5.07
1977	57.80	5.88	10.73	12.11	16.26	24.05	1.90	5.02
1978	60.80	6.58	10.69	12.50	17.43	23.52	1.81	5.43
1979	62.40	6.41	9.78	12.66	18.91	23.24	1.92	4.97

Source: Computed from data Table 2.

ADMISSIONS TO SPECTATOR EVENTS (8)	MOTION PICTURE THEATERS (8a)	LEGITIMATE THEATER (8b)	SPECTATOR SPORTS (8c)	CLUBS, ETC. (9)	COMMERCIAL PARTICIPANT AMUSEMENT (10)	PARI-MUTUAL NET RECEIPTS (11)	OTHERS (12)
23.97	19.01	3.31	1.74	7.93	5.45	.25	6.28
26.83	21.95	1.95	2.32	9.76	5.61	.24	11.59
24.56	20.17	1.93	2.98	5.96	5.53	1.23	8.33
25.41	20.49	1.97	2.70	5.66	5.49	1.56	8.11
25.00	20.31	2.03	2.73	5.16	5.31	1.64	8.59
29.13	25.20	2.20	2.20	4.96	5.20	1.65	8.66
34.68	29.84	2.82	1.45	5.08	5.08	1.35	8.87
33.59	28.91	3.05	1.72	5.08	5.23	2.81	9.38
33.09	28.06	2.88	2.23	5.40	5.47	2.95	8.63
29.60	24.02	2.51	2.85	5.14	5.42	3.46	7.82
27.43	21.71	2.57	3.03	5.43	5.54	3.49	8.00
24.86	19.65	2.37	3.01	5.66	5.55	3.35	7.51
22.78	17.22	2.22	2.89	5.44	5.17	3.00	7.22
19.39	14.80	1.99	2.40	4.95	4.80	2.55	6.63
17.80	13.61	1.94	2.30	5.03	4.97	2.67	6.81
15.82	12.24	1.84	2.14	4.85	4.74	3.16	6.63
14.36	10.40	1.78	1.98	4.60	4.60	3.32	6.93
14.08	10.19	1.84	1.89	4.56	4.47	3.11	6.80
14.16	10.50	1.92	1.78	4.43	4.57	2.97	6.85
13.54	10.04	1.97	1.70	4.37	4.80	2.97	6.99
11.89	7.93	2.03	1.72	4.41	5.29	3.01	7.49
10.48	6.55	2.01	1.70	4.80	5.68	3.10	7.86
9.88	5.76	1.98	1.85	4.53	6.17	3.13	8.23
9.64	5.62	2.01	2.09	4.02	7.23	3.17	8.84
9.38	5.47	1.84	2.27	4.30	7.81	3.20	9.38
9.19	4.78	1.84	2.43	4.04	7.72	3.38	9.56
8.65	4.50	1.70	2.53	3.81	7.61	3.36	9.69
8.31	4.15	1.69	2.59	3.83	7.35	3.51	9.58
8.63	4.17	1.55	2.65	3.57	6.85	3.27	9.52
7.98	3.99	1.49	2.63	3.19	6.12	2.93	9.31
7.63	3.56	1.53	2.54	3.05	6.11	2.80	9.67
7.69	3.85	1.44	2.64	3.13	6.01	2.88	9.62
7.89	3.71	1.39	2.55	3.02	5.80	2.78	9.74
7.90	3.84	1.38	2.71	2.93	5.87	2.93	9.71
7.74	3.54	1.39	2.65	2.88	5.97	3.10	9.73
7.13	3.26	1.28	2.44	2.65	5.50	2.85	8.96
6.72	3.26	1.23	2.30	2.50	5.37	2.69	9.02
6.76	3.47	1.22	2.12	2.51	5.41	2.70	9.07
7.41	3.99	1.24	2.28	2.47	5.51	2.66	9.32
7.61	4.17	1.29	2.17	2.36	5.43	2.54	9.42
8.30	5.02	1.28	2.08	2.08	5.19	2.25	8.82
8.06	4.61	1.38	1.97	1.97	4.93	2.30	8.22
7.83	4.33	1.52	2.08	1.92	4.97	2.24	8.17

most accurate and reliable predictions.

Kitchen and James' projections could now be compared with actual data for the year 1975 and related to 1980 by using actual 1979 data. These projections were in terms of constant 1972 dollars. After adjusting Kitchen and James' data on DPI and recreation expenditures to constant 1972 dollars, a comparison between projected and actual data was made. In 1968, it was projected that consumer expenditures on recreation would increase to $51.2 billion by 1975 and $64.4 billion by 1980. Actual data for 1975, in 1972 dollars, reveal that consumers actually spent $52.6 billion in 1975 and by 1979 they had spent $62.4 billion on recreation expenditures. In both instances Kitchen and James' estimates were low yet the accuracy of the linear regression method used was within 97 percent of actual consumer expenditures.

In an effort to update projections to 1990, two sets of projections were developed for the years 1980 to 1990 (Table 8). The same linear regression method was used. The first set of predictions was regressed over the entire fifty-year period. The second set was based on the years 1959-1979, or regressed over the past 20 years.

It can be seen that regression analysis over the past 50 years can no longer be a reliable predictor of future consumer expenditures on recreation. The earlier years of the study, the 1930's-1940's, pull the future projections down and make them inaccurate. Regressing over the entire 50 year span, coupled with the low expenditures in the 1930's and 1940's bring future prediction below even present day expenditures. For instance, using 50 years data it was estimated that by 1985 consumers will spend a total of $60.4 billion on recreation expenditures. In 1979, consumers had already expended $62.4 billion on recreation. The lack of

TABLE 8. ESTIMATED CONSUMER EXPENDITURES ON RECREATION: FOR 1980-1990 (IN BILLIONS OF 1972 DOLLARS).

	Regressed on "50 Year" Period	Regressed on "20 Year" Period
1980	54.7	64.3
1981	55.8	66.3
1982	56.9	68.3
1983	58.1	70.3
1984	59.3	72.3
1985	60.4	74.3
1986	61.5	76.3
1987	62.7	78.3
1988	63.8	80.4
1989	64.9	82.4
1990	66.1	84.4

Source: Computed from Table 1 and regression analysis.

accuracy and validity of future predictions using 50-year data is apparent.

Basing future predictions of consumer expenditures on recreation on 20-year data appears to be more reliable. A confidence interval of 95 percent was obtained with these projections. Based upon the 20-year data, in 1972 dollars, it is estimated that consumers will spend $74.3 billion on recreation by 1985. By 1990 this figure is projected to increase to $84.4 billion. These represent percentage growths from 1979 to approximately 19 percent and 35 percent respectively.

INTERPRETATION OF RESULTS

Upon reviewing the data gathered for the study, it is apparent that increases in spending on recreation have resulted primarily from increases in DPI. In constant 1972 dollars, DPI has risen from $229.8 in 1929 to $994.1 in 1979. Increased available leisure time for the general public has promoted a shift in the make up of the consumption expenditure dollar. This shift from other personal consumption forms of expenditures to recreation has been a gradual process. All indications seem to point to the fact that increasing sums of money continue to be spent on recreational items. These increased expenditures are a result of expanding incomes and not as a result of any sudden or dramatic shift in consumer purchasing.

There have been notable shifts in expenditure patterns within the recreation market itself over the fifty-year period. Between the years 1929-1968, seven of the twelve classifications exhibited increases as a percent of total recreation and five showed decreases. Increases were particularly large in classifications 3 (nondurable toys, etc.) and classifications 4 (wheel goods, durable toys, etc.). Decreases were noticeably large in spectator amusements and one of its sub-classifications, motion picture attendance.

Marked shifts in expenditure patterns have again occurred over the past decade within the recreation sector. In comparison to the earlier years mentioned, four of the twelve classifications exhibited increases as a percent of total recreation and eight showed decreases. Significant increases occurred in both classification 4 (wheel goods, durable toys, etc.) (5.45 percentage points or 41 percent) and classification 5 (radio and television receivers, etc.) (2.82 percentage points or 14 percent). An interesting increase occurred in motion picture attendance. Over the past 10 years it has increased 17 percent.

Classification 3 (nondurable toys, etc.) which showed significant gains for the first 40 years of the study has decreased 4.5 percent in the past 10 years. Additionally, significant decreases have occurred between 1969 and 1979 in classification 6 (radio and television repair) (57 percent), classification 9 (clubs and fraternal organizations, etc.) (57 percnet), and classification 11 (pari-mutual net receipts, etc.) (24 percent).

The shift within the recreation market seems to indicate a trend towards investment in more expensive and durable commodities. Recreational items which serve the person at home or close to home are increasing. Conversely, the service type items in general are decreasing. Perhaps this can be directly related to the cost of fuel required to attend these types of activities and the increased cost of the activity itself.

The estimates based upon the regression analysis indicate that consumers will indeed spend increased sums of money on recreation. No accurate prediction can be made concerning shifts in expenditures within the recreation sector itself. These shifts depend upon consumer preference

which may be influenced by introduction of new products or services.

Over the fifty-year study, shifts in consumer expenditure patterns occurred over long periods of time. It seems in the past ten years shifts have occurred more rapidly. The spiraling inflationary trend of our economy and the energy situation perhaps are increasing the rapidity of shifts within the recreation market. In its simplest form, the combination of increased leisure time and increased DPI points to an ever expanding leisure market. Consumer preferences and trends in the economy will decide how these increased sums of money will be spent within the recreation market in the future.

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